

SEQUENCE LISTING

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<120> Single-chain antibodies against the 37 kDa/67 kDa laminin receptor as tools for the diagnosis and therapy of prion diseases, production and use

25 <130> 14620/CH/ajk

<140> PCT/EP2004/011268

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<141> 2004-10-08

<160> 4

5 <170> PatentIn version 3.1

<210> 1

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<211> 816

<212> DNA

15 <213> artificial sequence

<220>

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<223> DNA codes for single-chain antibody scFv S18. It is contained in

the plasmid pEX/HAM/LRP-S18. This plasmid was deposited in the DSMZ,

25 Mascheroder Weg 1b, D-38124 under the accession number xxxx. After

transformation of the plasmid in E.coli XL1-Blue, the production of

the scFv antibody S18 is possible.

30

<400> 1

caggtgcagc tgcaggagtc tgggggaggc ttggcacagc ctggggggtc  
cctgagactc 60

tcctgtgcag cctctggatt catgttttagc aggtatgcc a tgagctgggt  
ccgccaggct 120

ccagggaaagg ggccagagtg ggtctcaggt attagtggta gtggtggtag  
5 tacatactac 180

gcagactccg tgaagggccg gttcaccgtc tccagagaca attccaagaa  
cacgctgtat 240

10 ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc  
gagacatccg 300

ggttttggc attttgacta ctggggccag ggaactctgg tcaccgtctc  
ctcagggagt 360

15 gcatccgccc caaagcttga agaaggtgaa ttttcagaag cacgcgtatc  
tgaactgact 420

caggaccctg ctgtgtctgt ggccttggga cagacagtca ggatcacatg  
20 ccaaggagac 480

agcctcagaa acttttatgc aagctggta cagcagaagc caggacaggc  
ccctactctt 540

25 gtcatctatg gtttaagtaa aaggccctca gggatcccag accgattctc  
tgccctccagc 600

tcagggaaaca cagcttcctt gaccatca ggggctcagg cggaaagatga  
ggctgactat 660

30 tactgttaact cccgggacag aagtggtaat catgtaaatg tgctattcgg  
cggagggacc 720

aagctgaccg tcctacgtca gcccaaggct gccccctcgg tcactctgtt  
35 cccgcctct 780

tctgcggccg      ctggatccca      tcaccatcac      catcac  
816

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<210> 2

<211> 272

10 <212> PRT

<213> artificial sequence

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<220>

<223> This protein corresponds to the single-chain antibody S18. It can

20 be synthesized in E.coli XL1-Blue after transformation of the plasmid pEX/HAM/LRP-S18

<400> 2

25 Gln Val Gln Leu Gln Glu Ser Gly Gly Gly Leu Val Gln Pro  
Gly Gly

1                    5                    10

15

30 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Met Phe Ser  
Arg Tyr

20                    25                    30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Pro Glu  
Trp Val

35

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Ser Gly Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp  
Ser Val

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55

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10

Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ser Lys Asn Thr  
Leu Tyr

65

70

75

80

15

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr  
Tyr Cys

85

90

20 95

Ala Arg His Pro Gly Phe Trp His Phe Asp Tyr Trp Gly Gln  
Gly Thr

100

105

110

25

Leu Val Thr Val Ser Ser Gly Ser Ala Ser Ala Pro Lys Leu  
Glu Glu

115

120

125

30

Gly Glu Phe Ser Glu Ala Arg Val Ser Glu Leu Thr Gln Asp  
Pro Ala

130

135

140

35

Val Ser Val Ala Leu Gly Gln Thr Val Arg Ile Thr Cys Gln  
Gly Asp

145 150 155  
5 160

Ser Leu Arg Asn Phe Tyr Ala Ser Trp Tyr Gln Gln Lys Pro  
Gly Gln

165 170  
10 175

Ala Pro Thr Leu Val Ile Tyr Gly Leu Ser Lys Arg Pro Ser  
Gly Ile

15 180 185 190

Pro Asp Arg Phe Ser Ala Ser Ser Ser Gly Asn Thr Ala Ser  
Leu Thr

20 195 200 205

Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys  
Asn Ser

25 210 215 220

Arg Asp Arg Ser Gly Asn His Val Asn Val Leu Phe Gly Gly  
Gly Thr

30 225 230 235  
240

Lys Leu Thr Val Leu Arg Gln Pro Lys Ala Ala Pro Ser Val  
Thr Leu

35 245 250

255

Phe Pro Pro Ser Ser Ala Ala Ala Gly Ser His His His His  
5 His His

260

265

270

<210> 3

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<211> 834

<212> DNA

15 <213> artificial sequence

<220>

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<223> DNA codes for single-chain antibody scFv N3. The DNA is contained

in the plasmid pEX/HAM/LRP-N3. This plasmid was deposited in the

25 DSMZ, Mascheroder Weg 1b, D-38124 under the accession number xxxx.

After transformation of the plasmid in E.coli XL1-Blue, the production of the scFv antibody N3 is possible.

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<400> 3

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cctgagactc 60

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ccgccaggct 120

ccaggcaagg ggctggagtg ggtggcagtt atatggatg atgaaagtaa  
5 taaatactat 180

gcagactccg tgaaggccg attcaccatc tccagagaca attccaagaa  
cacgctgtat 240

10 ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc  
gactataccg 300

cgctcgctt tctactacgg tatggacgtc tggggccaag ggaccacggt  
caccgtctcc 360

15 tcagggagtg catccgcccc aacccttaag cttgaagaag gtgaattttc  
agaagcacgc 420

gtacagcctg tgctgactca gccaccctca gcgtctggga cccagggca  
20 gagggtcacc 480

atctttgtt ctggaagcag atccaacatc ggaagtaata ctgtaaactg  
gtaccagcag 540

25 ctcccagggaa cggccccc aaactcctcatc tatggtaata atcagcggcc  
ctcaggggtc 600

cctgagcgat tctctggctc caagtctggc acctcagcct ccctggccat  
cagtgggctc 660

30 cagtcagagg atgaggctga ttattactgt gcagcgtggg atgacagcct  
gactgggtgt 720

ctttcggcg gagggaccaa gctgaccgtc ctaggtcagc ccaaggctgc  
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actctgttcc cgccctttc tgccggccgtt ggcatccatc accatcacca  
tcac 834

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<210> 4

<211> 278

10 <212> PRT

<213> artificial sequence

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<220>

<223> This protein corresponds to the single-chain antibody N3. It can

20 be synthesized in E.coli XL1-Blue after transformation of the plasmid pEX/HAM/LRP-N3.

<400> 4

25 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro  
Gly Arg

1 5 10

15

30 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser  
Ser Tyr

20

25

30

- 10 -

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu  
Trp Val

35

40

45

5

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp  
Ser Val

50

55

60

10

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr  
Leu Tyr

65

70

75

80

15

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr  
Tyr Cys

85

90

20 95

Ala Thr Ile Pro Arg Ser Ser Phe Tyr Tyr Gly Met Asp Val  
Trp Gly

25

100

105

110

Gln Gly Thr Thr Val Thr Val Ser Ser Gly Ser Ala Ser Ala  
Pro Thr

30

115

120

125

Leu Lys Leu Glu Glu Gly Glu Phe Ser Glu Ala Arg Val Gln  
Pro Val

35

130

135

140

Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg  
Val Thr

5 145 150 155

160

Ile Ser Cys Ser Gly Ser Arg Ser Asn Ile Gly Ser Asn Thr  
10 Val Asn

165 170

175

Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile  
15 Tyr Gly

180 185 190

Asn Asn Gln Arg Pro Ser Gly Val Pro Glu Arg Phe Ser Gly  
20 Ser Lys

195 200 205

Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln Ser  
25 Glu Asp

210 215 220

Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Thr  
30 Gly Val

225 230 235

240

Leu Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro  
Lys Ala

245

250

255

5

Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Ala Ala Ala  
Gly Ser

260

265

270

10

His His His His His

275

15